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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,049	01/15/2002	Monika Oswald	218230US0X	2944

22850 7590 12/12/2005

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ALEXANDRIA, VA 22314

EXAMINER
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STEIN, STEPHEN J

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/045,049

**Applicant(s)**

OSWALD ET AL.

**Examiner**

Stephen J. Stein

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9,11-13,16,17 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) 18-20 and 31-33 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-30 is/are allowed.
- 6) ☒ Claim(s) 9,11-13,16 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on December 22, 2001. It is noted, however, that applicant has not filed a certified copy of the German application as required by 35 U.S.C. 119(b).

#### ***Claim Rejections - 35 USC § 103***

3. Claims 9, 11-13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over 3,629,666 (Yokozawa).

Yokozawa teaches a mixed layer of SiO<sub>2</sub> and TiO<sub>2</sub> which comprises 5-30% TiO<sub>2</sub> on a semiconductor substrate (material which has a very low coefficient of expansion) wherein the raw materials are heated from 250° to 500° (sintered) to form an the film (col. 2). It is the examiner's position that since independent claim 9 recites that the layer is sintered, the raw material powder used to make sintered layer is no longer in it's initial powdered form and the final sintered product is the same that is disclosed in the prior art. Consequently, the claimed BET surface area of the powder is merely part of the process of achieving the final sintered film and absent a showing of materially different final product, it does not provide a distinction of the prior art. Process limitations in product claims are generally not dispositive on patentability unless it is shown that the process limitations produce a materially different product. See MPEP §2113.

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Although Yokozawa fails to teach the specifically claimed thicknesses of the mixed oxide layer, absent a showing of criticality with respect to the claimed thickness (a result effective variable), it would have been obvious to one of ordinary skill in the art to optimize the thickness through routine experimentation. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

***Allowable Subject Matter***

4. Claims 21-30 are allowed over the prior art for reasons of record in the office action mailed October 25, 2005.

***Response to Arguments***

5. Applicants have amended independent claim 9 to now include the limitation “wherein the thickness of the layer ranges from 1  $\mu$ m to 1 mm”. Applicants argue that with this amendment, the claims are now are patentable over the Yokozowa reference.

This argument has been considered but not deemed persuasive. In the previous office action an obviousness type rejection was made over claims 10-12 which further claimed limitations relating to the thickness of the mixed oxide layer. Applicants have provided no arguments in their response as to why it would not have been obvious to one of ordinary skill in the art at the time of the invention to optimize the thickness through routine experimentation.

Consequently, in response to applicants’ amendment, the rejections made under 35 USC 102 to the claims have been withdraw, but new rejections over the claims have been made under 35 USC 103.

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It is noted that in the interview held on September 15<sup>th</sup> 2005, applicants' representative made the statement that it was believed that the addition of the proposed thickness limitation made the claims patentably distinct, since "there was no motivation in to make the film in the claimed thickness range since in the electronics industry these types of films are typically much thinner".

Applicants did not provide this argument in their response to the office action. Notwithstanding this, applicants are directed to US 3,967,296 which discloses a semiconductor device with a similar insulating passivating film to that of the Yokozowa reference comprising silicon oxide having a thickness of 5000 to 30,000 angstroms (0.5 to 3 microns) and US 5,059,553 which discloses a semiconductor device with a glass passivating layer of at least 3 microns.

Consequently, there is a motivation in the art to select a thickness within the claimed range for the mixed oxide film of Yokozowa since those films are known to be in that thickness range.

#### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

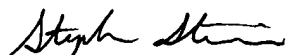
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Stein whose telephone number is 571-272-1544. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:00 p.m. If the attempts to reach the examiner are unsuccessful, the examiner's supervisor, Deborah Jones can be reached by dialing 571-272-1535. The official fax number is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 2, 2005



Stephen J. Stein  
Primary Examiner  
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